

## NOMINAL DIAMETER UP TO 39 MM

DESIGNATION SYSTEM FOR NUTS WITH NOMINAL HEIGHT > 0,8 D (ISO 898-2: 1992)													
Class	Securing screws					Nuts							
	Property class	Diameter (mm)	Style 1		Style 2								
			Diameter (mm)										
4	3.6 - 4.6 - 4.8	> M 16	> M 16										
5	3.6 - 4.6 - 4.8	≤ M 16	≤ M 39										
	5.6 - 5.8	≤ M 39	≤ M 39										
6	6.8	≤ M 39	≤ M 39										
8	8.8	≤ M 39	≤ M 39			> M 16 - ≤ M 39							
9	9.8	≤ M 16	-			≤ M 16							
10	10.9	≤ M 39	≤ M 39										
12	12.9	≤ M 39	≤ M 16			≤ M 39							
DESIGNATION SYSTEM FOR LOAD TESTS OF NUTS WITH NOMINAL HEIGHT > 0.5 D AND < 0.8 D													
Class	Nominal stress under proof load N/mm <sup>2</sup>					Actual stress under proof load N/mm <sup>2</sup>							
04	400					380							
05	500					500							
LIMITS OF CHEMICAL ANALYSIS													
Class	Max C%		Min Mn%		Max P%		Max S%						
4 - 5 - 6	0.50		-		0.06		0.15						
04 - 8 - 9	0.58		0.25		0.06		0.15						
05 - 10	0.58		0.30		0.048		0.058						
12	0.58		0.45		0.048		0.058						
Alloying elements may be added to obtain the mechanical properties required for nuts. 05 - 8 style 1 nuts above M 16 and 10 - 12 should be hardened and tempered.													
MECHANICAL PROPERTIES AT ROOM TEMPERATURE													
Diameter (mm)	CLASS 04 LOW NUT					CLASS 05 LOW NUT				CLASS 4 STYLE 1			
	Stress under proof load Sp N/mm <sup>2</sup>	Hardness HV		State	Stress under proof load Sp N/mm <sup>2</sup>	Hardness HV		State	Stress under proof load Sp N/mm <sup>2</sup>	Hardness HV		State	
min		max	min			max	min			max			
- M4	380	188	302	NQT	500	272	353	QT	510	117	302	NQT	
M4 M7													
M7 M10													
M10 M16													
M16 M39													
CLASS 5 STYLE 1					CLASS 6 STYLE 1				CLASS 8 STYLE 1				
- M4	520	130	302	NQT	600	150	302	NQT	800	180	302	NQT	
M4 M7													
M7 M10													
M10 M16													
M16 M39													
CLASS 8 STYLE 2					CLASS 9 STYLE 2				CLASS 10 STYLE 1				
- M4	890	180	302	NQT	900	170	302	NQT	1040	272	353	QT	
M4 M7													
M7 M10													
M10 M16													
M16 M39													

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MECHANICAL PROPERTIES AT ROOM TEMPERATURE									
Diameter (mm)		Stress under proof load Sp N/mm <sup>2</sup>	CLASS 12 STYLE 1			CLASS 12 STYLE 2			
			Hardness HV		State	Stress under proof load Sp N/mm <sup>2</sup>	Hardness HV		State
				min			max	min	
-	M4	1140	295	353	QT	1150	272	353	QT
M4	M7	1140				1150			
M7	M10	1140				1160			
M10	M16	1170				1190			
M16	M39	-	-	-	-	1200			

### NOTES

NQT = not quenched and tempered

QT = quenched and tempered

EN ISO 898-2 standard can't be applied to nuts resistant to temperatures higher than + 300 °C or lower than - 50 °C.

The standard applies to nuts:

- with nominal diameter up to 39 mm
- with triangular threads according to ISO 68-1 standard
- with combination of diameters and steps, according to ISO 261 standard (with bigstep thread)
- with thread tolerances 6H according to ISO 965-1 and ISO 965-2 standards
- with specified mechanical properties
- with key width according to ISO 272 standard or equivalents
- with nominal height equal or higher than 0.5 D
- built in carbon or low alloyed steel

